

STUDY OF PEDESTRIAN PATH SAFETY AT PONDOK CABE TERMINAL USING THE RELATIVE IMPORTANCE INDEX METHOD

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ABSTRACT

Bus station is one of the transportation nodes and in carrying out daily community activities, it is necessary to provide facilities according to the regulations that have been set, as well as the needs of the community and users of public transportation services. From observations in the Pondok Cabe Terminal area, there are pedestrian paths in conditions that do not comply with existing regulations. During busy terminal hours, vehicle mobility becomes one lane with pedestrians, posing a risk to the safety of pedestrians heading into the terminal area. Therefore, it is necessary to conduct a pedestrian safety study to improve the safety of pedestrians in the Pondok Cabe Terminal area. The method that will be used in this research is the Relative Importance Index (RII), which is a statistical method used to determine the relative importance of several variables or factors to certain dependent variables that have been adjusted to applicable regulations. The results is obtaining a percentage value of 21.4% with the criteria "Very Poor". The three highest rankings are based on RII analysis, namely the first rank with an RII value of 0.804 is a ramp with a slope of 8o or a height of 50 cm and a length of 1.2 m, the second rank with an RII value of 0.792 is a safety fence or handrail for security, the third rank with an RII value of 0.788 is a minimum lane width of 110 cm for one-way lanes and 160 cm for two-way lanes.

Keywords: pedestrian; pondok cabe terminal; relative importance index; safety study

INTRODUCTION

The development of urban infrastructure has created new challenges related to pedestrian safety and security (Utomo 2024). The public's need for public facilities that support ease and comfort in carrying out activities is increasing (Desetyaningrum and Sari 2021). The increase in the volume of motorized vehicles and less pedestrian-friendly road designs can increase the risk of accidents and threaten pedestrian safety. Pedestrian fatalities have almost doubled compared to road traffic fatalities. Of the fatalities above, the most victims are elderly pedestrians (Blanks et al. 2024). Pedestrian safety is a condition in which every individual who walks can move safely and comfortably without being threatened by danger or accidents when using public facilities such as roads, sidewalks, or other pedestrian areas. Pedestrians themselves are the most vulnerable road users. If involved in an accident, the risk to the facilities they face is greater than that of other road users. The unprotected body of a pedestrian allows direct contact with the vehicle that hits it (Agam 2019). Pedestrian paths are infrastructure that function as a container for humans to move or carry out activities, namely walking (Salsabila and Apsari 2021). Pedestrian paths in terminals are an important feature that improves the safety and comfort of passengers, especially those with disabilities or limited mobility (Moran 2023). With pedestrian paths, passengers with limited mobility or the elderly can move safely and efficiently from inside and outside the transportation hub (Fadel, Khodeir, and Nessim 2023). This reduces the risk of accidents between passengers and passing buses, and makes it easier for passengers with limited mobility or the elderly to move inside the terminal building to buy tickets. In addition, pedestrian paths also help reduce congestion within the terminal, allowing passengers to move together without blocking each other. This can also reduce the waiting time for passengers to board buses, as they do not have to wait for the bus to stop and cross the bus departure lane (Yendra, Haworth, and Watson-Brown 2024).

Pedestrian path can also generate cost savings for terminal operators, as they reduce the need to build more platforms or upgrade other infrastructure to address congestion within the terminal (Arifin and Intari 2017). Additionally, pedestrian path can also help improve bus operational efficiency, as they allow passengers to walk more quickly and safely within the terminal (Hishikawa and Iryo-Asano 2022). Overall, station pedestrian path are an important feature that improves the comfort, safety, and efficiency of passengers, especially those with disabilities or limited mobility. Therefore, improving the quality of pedestrian services is important (Sun et al. 2024).

People with disabilities are a group of people who have limitations that can interfere with their active role in social life (Ar-Rasyiid 2017). Types of disabilities consist of long-term physical, intellectual, mental and sensory disabilities who have difficulty interacting with the environment and experience obstacles to being able to actively participate with other citizens based on equal rights (Hasanah 2017) (Jefri 2016). These pedestrian needs factors can be implemented through the provision of pedestrian facilities that pay attention to all groups from children, the elderly, and the disabled (Alfarizi, Hartono, and Radjikan 2024). Problems related to commercial activities around pedestrian paths often sacrifice facilities intended for pedestrians so that pedestrian paths cannot be utilized optimally. Thus, urban planning must also consider the needs of pedestrians in creating these pedestrian paths. It is hoped that by knowing the level of pedestrian service for the elements of Pedestrian Friendly Street, recommendations for improvement will be more in line with pedestrian needs.

The development of gender-responsive public facilities is one way to provide infrastructure that can accommodate the needs of all user elements including vulnerable groups and those with special needs (Peginusa et al. 2023). Pedestrian paths play an important role in connecting and supporting the vitality of an urban space. Pedestrian paths to bus stops and feeders are redesigned and repaired so that they can also be accessed by people with disabilities. The role of accessibility can provide convenience by paying attention to the needs and abilities of people with physical and visual disabilities, people with mental, cognitive and sensory disabilities, as well as paying attention to the needs and abilities of the elderly, pregnant women, babies, children, and dwarfs (Desetyaningrum and Sari 2021). The following is passenger production data at the Pondok Cabe Terminal:

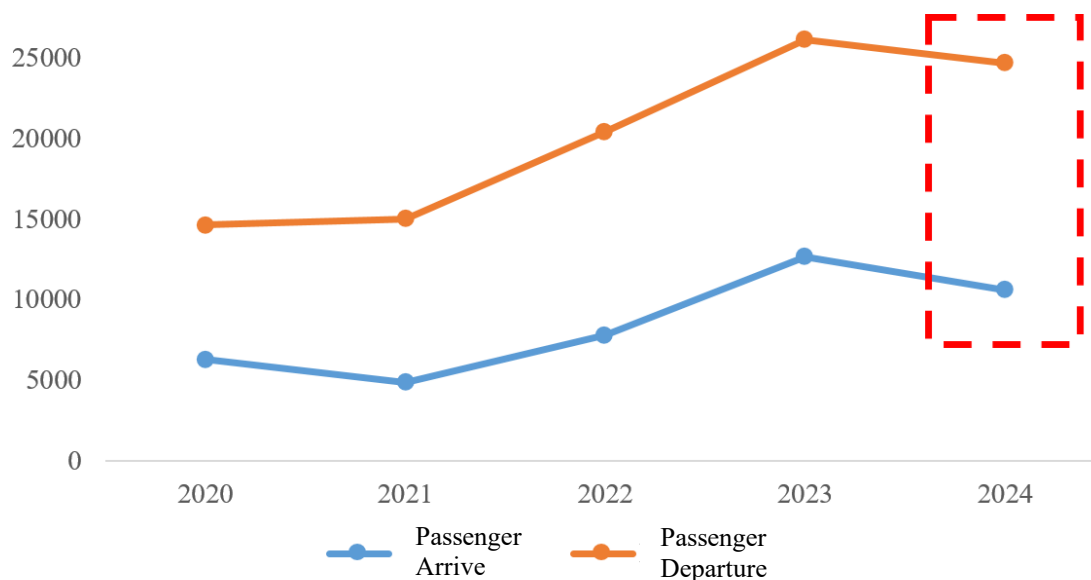


Figure 1. Passenger Comparison Chart During 2020-2024

Source: Siasati Data from the Ministry of Transportation (Perhubungan 2025)

Based on production data, the number of passengers departing and arriving at Pondok Cabe Terminal from 2020 to 2023 tends to increase, but will decrease slightly in 2024. This is in accordance with previous research in 2024 regarding minimum service standards at Pondok Cabe Type A Terminal. The research was based on Ministerial Regulation Number 40 of 2015 with the results of the terminal service level being fulfilled reaching 85.71% of all service aspects in the regulation. However, there is a significant difference in the level of customer interest and satisfaction with terminal services with a high gap value in the aspect of convenience/affordability of services, so that action needs to be taken to improve these services (Ilman Fiqih and Handayani 2024). Another cause could be that there are still several shadow terminals or public vehicle pools around Pondok Cabe Terminal which are still operating illegally to pick up and drop off passengers.

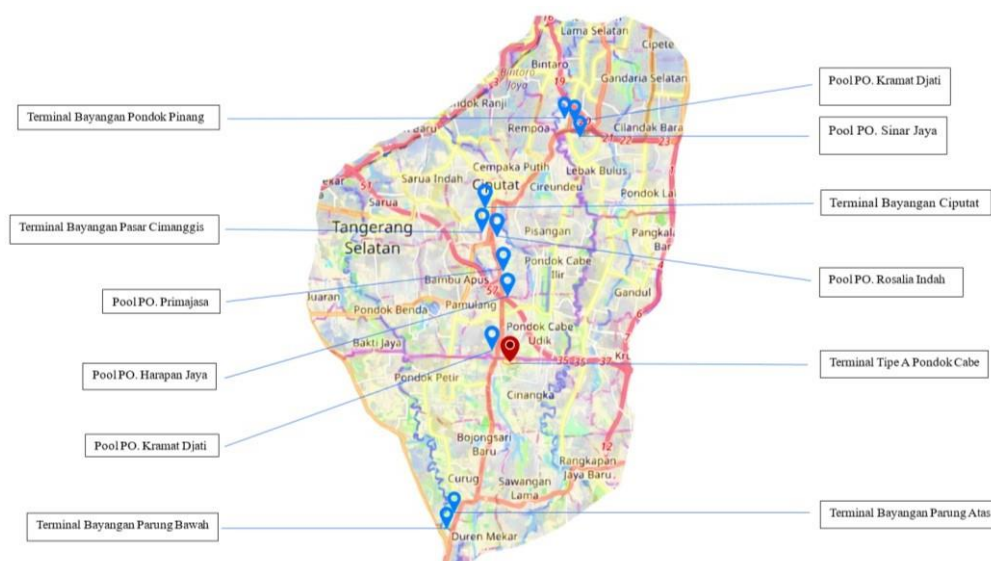


Figure 2. Location of Shadow Terminal and Pool around Pondok Cabe Terminal
Source: (Ilman Fiqih and Handayani 2024)

Firm action is needed from the authorized government to close these places, as well as internal evaluation from terminal organizers to compile and realize service improvements so that terminal production data increases again. Several studies related to pedestrian path evaluation studies in terminals or public services in Indonesia have been conducted and are presented in the following table:

Table 1.
Previous Research (State of Art)

No	Researcher	Research Year	Research Title	Research Method	Research Results
1	Imbar Desetyaningrum & Suzanna Ratih Sari	2021	Optimization of pedestrian paths for disabled users on Jalan Imam Bonjol Semarang	Qualitative approach to The one described using the descriptive method	The available pedestrian paths are less accessible to the needs and abilities of people with disabilities, both people with physical disabilities, as well as the elderly, pregnant women and mothers using baby strollers (Desetyaningrum and Sari 2021).

No	Researcher	Research Year	Research Title	Research Method	Research Results
2	Stefani Switly Peginusa, Sylviana J Pelealu, Arnetha S Raintung, Dian Puspita Sari	2023	Evaluation of gender-friendly pedestrian paths using the Gender Impact Assessment (GIA) indicator. Case Study of the Piere Tendean Street Pedestrian Path-Boulevard on Business Area	The research method uses descriptive research with a quantitative approach	The pedestrian paths that have been built in general do not meet several of the criteria used. Of the 5 (five) criteria assessed, 2 (two) criteria, namely infrastructure for all (accessibility) and environmentally friendly infrastructure criteria, have not been met. So there still needs to be further improvement and development to meet gender-responsive infrastructure standards (Peginusa et al. 2023).
3	Agung Setio Utomo	2024	Evaluation at Crossings Between Batu Ceper Station and Poris Plawad Terminal, Tangerang City	Evaluation method by determining the results of determining alternatives	The results of the study recommended adding pedestrian bridge crossing facilities. The volume of pedestrians during peak hours is 1,131/hour and the volume during peak hours is 6,665/hour (Utomo 2024).
4	Yolanda Putri Cahya Sukma, Satriya Wahyu Firmandhani	2020	Evaluation of Accessibility of Pedestrian Paths to Trans Jateng Bus Departures at Bawen Terminal	The method used in this study is quantitative	The condition of the two pedestrian paths at Bawen Terminal that have been provided as a whole has met the aspects of pedestrian path assessment so that this pedestrian path has met the requirements for pedestrian paths and is classified as being in good enough condition to be used by pedestrians (Sukma and Firmandhani 2020)

Source: Author (2025)

The relevance of the previous research above to this research is in the safety evaluation, the research object is in the form of pedestrian paths and vulnerable groups, pedestrian paths that always result in crossings between pedestrians and motorized vehicles and the research object is in the form of pedestrian path assessment indicators used in the research based on the Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia No. 14/PRT/M/2017 which is used as the basis for assessing research factors (RI 2017). The pedestrian path at Pondok Cabe Terminal, South Tangerang City is a vital area that serves pedestrian movement from the entrance gate to the terminal building and vice versa. Analysis of pedestrian safety and security, both general and vulnerable groups, is very important to create a safe terminal environment. Therefore, it is necessary to conduct a study on the Review of Pedestrian Path Safety Studies at Pondok Cabe Terminal, South Tangerang. The hypothesis found in this study is that there is still a lack of facilities and infrastructure that support pedestrian safety, a high risk of accidents for pedestrians, especially vulnerable groups, and a lack of awareness of the importance of pedestrian safety among users of Pondok Cabe Terminal. This study aims to conduct a review of pedestrian path safety studies at the terminal according to indicators from existing regulations and to determine the factors that support improving the quality of pedestrian path facilities for vulnerable groups at the terminal.

METHOD

This study uses an evaluation research type, namely a type of study of the assessment of a result or problem solving in a condition that has been completed. The variables in this study are the safety of pedestrian paths at the Pondok Cabe Terminal based on the available facilities and factors that affect the quality of pedestrians. The methodology used to evaluate the safety of pedestrian paths is the observation methodology, namely direct observation, while the data processing technique is quantitative where the results of the data analysis will be presented systematically so that they are easy to understand and draw conclusions. The factors that affect the safety of pedestrian paths use a data collection methodology with interviews and questionnaires based on a Likert scale and a data processing method with a relative importance index (RII) using the excel program. Observations were made by direct observation of the condition of the pedestrian path at the Pondok Cabe Type A Terminal based on the Standard Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia 14/PRT/M/2017 concerning Building Ease Requirements. The next step is to interview 3 resource persons who are experts in their fields, namely the first Head of Terminal or what is now called the Terminal Service Unit Supervisor, the second Head of Administration, and the third operational staff at the Pondok Cabe terminal.

After conducting observations and interviews and finding the influencing factors, a questionnaire was created. A questionnaire is a list of written questions addressed to respondents, the respondents' answers to all questions on the questionnaire are then recorded. The subjects targeted for filling out the questionnaire are all public transportation users at the Pondok Cabe Terminal with the provision of coming to the terminal and/or departing from the terminal. From the amount of known data, the sample taken in this study was some of the visitors at the Pondok Cabe Type A Terminal totaling 60 samples. The Slovin formula is used to determine the number of respondents (samples).

$$n = 47,84 \text{ people} \approx 50 \text{ people}$$

So, the number of samples that will be used as respondents from filling out the questionnaire is 50 people. Data from interviews with experts in their fields are then made into a questionnaire using a Likert scale (Malyasari, Hendarto, and Kusdian 2024), as in the following table:

Table 2.
Likert Scale Assessment

Importance Level	Score
Very Important	5
Important	4
Undecided/Neutral	3
Not Important	2
Very Unimportant	1

Source: Likert Scale Reference (Malyasari et al. 2024)

After collecting the questionnaire data, validity and reliability tests were conducted. Validity and reliability tests are two fundamental concepts in research, especially in the development and use of questionnaires. Validity tests are conducted to ensure how well an instrument is used to measure the concept that should be measured (Sugiyono 2010). While the reliability test is a continuation of the validity test, the items that are included in the test are only valid items and determine whether the instrument is reliable or not using a limit of 0.6 (Arikunto 2006). In the context of pedestrian path analysis at the terminal, these two tests have a very crucial role to ensure that the data collected is accurate, relevant, and reliable. The discussion is carried out with the score of the results of the Pedestrian Path Safety Review and items that are lacking or need to be improved with the following Likert scale assessment criteria:

Table 3.
Likert Scale Assessment

Percentage Interval	Criteria
80% - 100%	Very Good
70% - 79%	Good
60% - 69%	Average
50% - 59%	Poor
0% - 49%	Very Poor

Source: Likert Scale Assessment Criteria (Arikunto 2006)

Relative Importance Index (RII) is a statistical method used to determine the relative importance of several variables or factors to a particular dependent variable. Simply put, RII helps us to sort out which factors have the most influence on an outcome or phenomenon. The general formula for calculating RII is as follows:

$$RII = \frac{\sum W \times F}{A \times N}$$

Description:

W = Weight or value given to each item or aspect (e.g., 1 for "Very Unimportant", 2 for "Unimportant", up to 5 for "Very Important").

F = Frequency count or number of respondents who selected the weight.

A = Maximum possible weight (usually the highest number on the rating scale e.g. 5).

N = Total number of respondents.

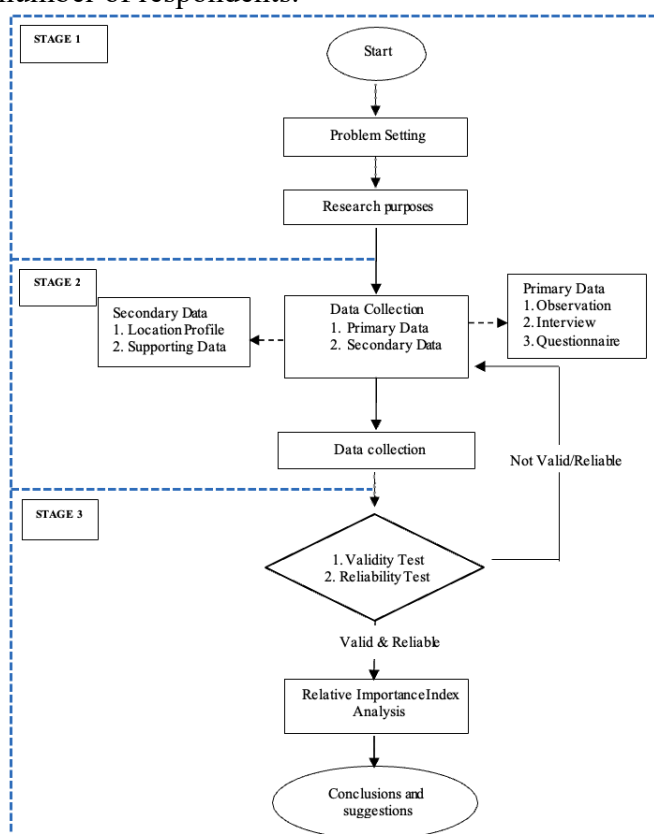


Figure 3. Research Flowchart
Source: Author (2025)

RESULT AND DISCUSSION

Research Data

Research Observation is a method of collecting data by directly observing an object, phenomenon, or event that occurs in the field. Researchers will record all things relevant to the object of their research. This observation is carried out systematically and in a planned manner to obtain accurate and reliable data. The main purpose of observation in this study is to describe the physical condition of the pedestrian path by directly observing the surface condition, width, slope, presence of physical obstacles, and supporting facilities such as seating, signs, and lighting. The next step is to find problems that are not revealed through other methods, such as damage to facilities, conflicts in the use of space, or potential hazards. The basis for the interview questions is the Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia 14/PRT/M/2017 concerning Building Facility Requirements. This primary data collection is carried out by taking inventory of the results of observations in the field that are used as research objects, described as follows:

Table 4.
Observation Results

No	Question	Availability		Observation Results
		Yes	No	
1	Road surface Stable, strong, weather resistant		√	Not available
2	Floor texture Smooth, non-slippery		√	Not available
3	Guiding Block on pedestrian path		√	Not available
4	Joints and bumps or no more than 1.25 cm	√		Available
5	Maximum slope of path Maximum road 2o	√		Available
6	Lighting (lamps), 50-150 lux, based on intensity of use distance between lamps 10 m		√	Not available
7	Drainage Perpendicular to the pedestrian path with a width of 50 cm and a height of 50 cm		√	Not available
8	Placement of drainage away from the edge of the pedestrian path		√	Still close
9	Minimum lane width 110 cm for one-way lanes and 160 cm for two-way lanes		√	Not available
10	Safety fence or handrail for safety		√	Not available
11	Difference in height between vehicle lane and pedestrian lane	√		Available
12	Protection against sunlight and rain in the form of a canopy/trees		√	Not available
13	Information board with good material and does not cause glare		√	Not available
14	Ramp slope 8° or height 50 cm and length 1.2 m		√	Not available

Source: Research Observation Results (2025)

Based on the table above, there are several factors that are not yet available, including: Stable, strong, weather-resistant road surface; Smooth, non-slippery floor texture; Guiding Block on the pedestrian path; Joints and bumps or no more than 1.25 cm; Lighting (lamps), 50-150 lux, based on the intensity of use, the distance between lamps is 10 m; Drainage Perpendicular to the pedestrian path with a width of 50 cm and a height of 50 cm; Drainage placement away from the edge of the pedestrian path; Minimum lane width of 110 cm for one-way lanes and 160 cm for two-way lanes; Safety fence or handrail for safety; Difference in height between vehicle lanes and pedestrian lanes; Protection against sunlight and rain in the form of a canopy/trees; Information boards with good material and do not cause glare; Ramp slope of 8° or height of 50 cm and length of 1.2 m.

The safety study of pedestrian paths at the Pondok Cabe Terminal, South Tangerang aims to assess the extent to which the paths provided have met the standards of comfort, safety, and accessibility for users. This evaluation is important to determine the shortcomings and advantages of the existing pedestrian path, so that improvements and enhancements in service quality can be made. The analysis of the evaluation of the pedestrian path at Terminal Type A Pondok Cabe, South Tangerang City was carried out using the following percentage formula:

Description:

RS = percentage of questions

n = number of points obtained on the questions

N = maximum number of points on the statement

Based on observations, the resulting calculations are as follows

The results of the pedestrian path evaluation at Pondok Cabe Terminal obtained a percentage value of 21.4%. So the assessment of the pedestrian path evaluation at Pondok Cabe Terminal, South Tangerang received the criteria of "Very Poor". The results of the observation were submitted as interview questions to the experts. The purpose of this interview is to be the basis for questions in the questionnaire. The recap of the interview data is as follows:

Table 5.
Summary of Interview Result Data

No	Question	Answer	
		Agree	Disagree
1	Road surface Stable, strong, weather resistant	√	
2	Floor texture Smooth, non-slippery	√	
3	Guiding Block on pedestrian path	√	
4	Lighting (lamps), 50-150 lux, based on intensity of use distance between lamps 10 m	√	
5	Drainage Perpendicular to the pedestrian path with a width of 50 cm and a height of 50 cm	√	
6	Placement of drainage away from the edge of the pedestrian path	√	
7	Minimum lane width 110 cm for one-way lanes and 160 cm for two-way lanes	√	
8	Safety fence or handrail for safety	√	
9	Protection against sunlight and rain in the form of a canopy/trees	√	
10	Information board with good material and does not cause glare	√	
11	Ramp slope 8° or height 50 cm and length 1.2 m	√	

Source: Interview Results (2025)

The third primary data collection is through distributing questionnaires. A questionnaire is a set of written questions designed to collect information from a number of respondents. These questions are arranged systematically and are intended to measure certain variables that are the focus of the research. In the context of pedestrian path evaluation, questionnaires are used to collect data on user perceptions, opinions, and experiences of existing facilities for terminal visitors. The results obtained are a Likert scale questionnaire from 1 to 5 to 50 respondents as a form of evaluation of pedestrian paths in the terminal. Making a questionnaire is an effective method in collecting quantitative data on user perceptions. The specified Likert scale can allow researchers to measure the level of agreement or disagreement of respondents with various aspects of the pedestrian path, such as comfort, safety, and ease of access. After filling out the questionnaire, validity and reliability tests are carried out. Validity and reliability tests are two fundamental concepts in research, especially in the development and use of questionnaires. In the context of analyzing pedestrian paths in the terminal, these two tests have a very crucial role in ensuring that the data collected is accurate, relevant, and reliable.

In the context of pedestrian paths, reliability indicates whether the questionnaire will produce the same results if given to the same respondents at different times or on different items but measuring the same concept. Here is a table of questionnaire validity tests:

Table 6.
Summary of Validity and Reliability Test Results

No	Questionnaire Statement	R Calculate	R Table	Cronbach's Alpha	Validity Test Results	Reliability Test Results
1	Road surface Stable, strong, weather resistant	0,653	0,285	0,703	Valid	Reliable
2	Floor texture Smooth, non-slippery	0,504	0,285	0,703	Valid	Reliable
3	Guiding Block on pedestrian path	0,540	0,285	0,703	Valid	Reliable
4	Lighting (lamps), 50-150 lux, based on intensity of use distance between lamps 10 m	0,531	0,285	0,703	Valid	Reliable
5	Drainage Perpendicular to the pedestrian path with a width of 50 cm and a height of 50 cm	0,434	0,285	0,703	Valid	Reliable
6	Placement of drainage away from the edge of the pedestrian path	0,614	0,285	0,703	Valid	Reliable
7	Minimum lane width 110 cm for one-way lanes and 160 cm for two-way lanes	0,428	0,285	0,703	Valid	Reliable
8	Safety fence or handrail for safety	0,676	0,285	0,703	Valid	Reliable
9	Protection against sunlight and rain in the form of a canopy/trees	0,606	0,285	0,703	Valid	Reliable
10	Information board with good material and does not cause glare	0,293	0,285	0,703	Valid	Reliable
11	Ramp slope 8° or height 50 cm and length 1.2 m	0,471	0,285	0,703	Valid	Reliable

Source: Validity and Reliability Test Results (2025)

The validity of questionnaire data refers to the extent to which a questionnaire actually measures what it is intended to measure. In other words, are the questions in the questionnaire relevant and in accordance with the concept to be measured? Interpretation of the R table value above 0.285. The R table value of 0.285 is the threshold used to determine whether a question item in the questionnaire is valid or not. If the correlation coefficient value between a question item and the total questionnaire score is greater than the R table value, then the question item is considered valid. Based on the validity test data, all indicators have a calculated R value > 0.285 , which means that all questions are valid. According to table 6 above, the reliability test of the level of importance is influenced by Cronbach's Alpha which is obtained by the number of question items created. The Cronbach's Alpha value for reliability for the level of importance is $r = 0.703$ with an overall value greater than the reference value of 0.6 so that the items are reliable for further analysis.

Relative Importance Index Analysis

RII is a statistical method used to determine the relative importance of several variables or factors to a particular dependent variable. In the context of the study, RII is used to identify the factors that have the most influence on improving the quality of pedestrian paths at Terminal Type A Pondok Cabe. Below is a description of the RII results for each factor that affects the condition of pedestrian paths at the terminal:

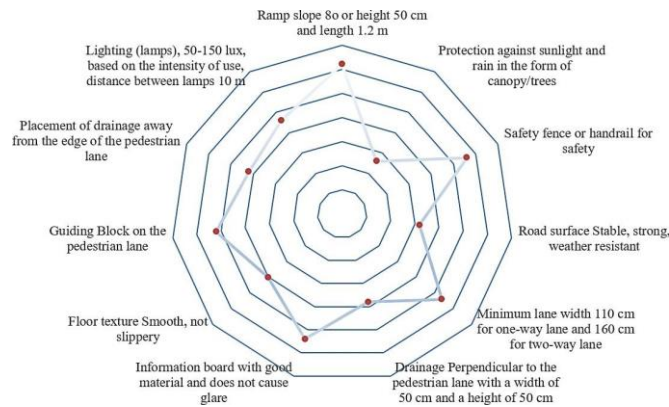


Figure 4. Relative Importance Index Radar Diagram
Source: Author (2025)

Based on the results of the RII graph above, there are factors that affect the condition of the Pondok Cabe Type A Terminal pedestrian path and their priority levels. Of the 11 factors above, some factors have high and low levels of importance. However, it should be noted that the results above can still be ranked according to their level of importance to facilitate future analysis. The following is a summary table of RII Data that has been adjusted according to its importance ranking:

Table 7.

Relative Importance Index Data Summary

No	Statement	Likert Scale					Total	RII	Rank
		1	2	3	4	5			
1	Ramp slope 8° or height 50 cm and length 1.2 m	0	1	13	20	16	50	0,804	1
2	Safety fence or handrail for safety	0	2	15	16	17	50	0,792	2
3	Minimum lane width 110 cm for one-way lane and 160 cm for two-way lane	0	2	15	17	16	50	0,788	3
4	Information board with good material and does not cause glare	0	0	19	15	16	50	0,788	4
5	Guiding Block on pedestrian lane	0	3	14	17	16	50	0,784	5
6	Lighting (lamps), 50-150 lux, based on intensity of use distance between lamps 10 m	0	3	16	16	15	50	0,772	6
7	Placement of drainage away from the edge of the pedestrian lane	0	3	17	16	14	50	0,764	7
8	Floor texture Smooth, not slippery	0	4	17	14	15	50	0,76	8
9	Drainage Perpendicular to the pedestrian lane with a width of 50 cm and a height of 50 cm	0	5	16	14	15	50	0,756	9
10	Road surface Stable, strong, weather resistant	0	6	16	14	14	50	0,744	10
11	Protection against sunlight and rain in the form of a canopy/trees	0	4	19	17	10	50	0,732	11

Source: Relative Importance Index Data Results (2025)

The main priorities for procurement and/or repair are as follows: the first rank with an RII value of 0.804 is a ramp with a slope of 8° or a height of 50 cm and a length of 1.2 m, the second rank with an RII value of 0.792 is a safety fence or handrail for safety, the third rank with an RII value of 0.788 is a minimum lane width of 110 cm for one-way lanes and 160 cm for two-way lanes, the fourth rank with an RII value of 0.788 is an information board with good material and does not cause glare, the fifth rank with an RII value of 0.784 is a guiding block on the pedestrian path, the sixth rank with an RII value of 0.772 is lighting (lamps), 50-150 lux, based on the intensity of use, the distance between lamps is 10 m, the seventh rank with an RII value

of 0.764 is the placement of drainage away from the edge of the pedestrian path, the eighth rank with an RII value of 0.760 is a smooth, non-slippery floor texture, the ninth 0.756 is a drainage perpendicular to the pedestrian path with a width of 50 cm and a height of 50 cm, the tenth rank with an RII value of 0.744 is a stable, strong, weather-resistant road surface, the eleventh rank with an RII value of 0.732 is protection against sunlight and rain in the form of a canopy/trees.

CONCLUSION

Based on the results of the analysis of the pedestrian path safety study at Pondok Cabe Terminal, South Tangerang, the results of the evaluation of the pedestrian path at Pondok Cabe Terminal obtained a percentage value of 21.4%. So the evaluation assessment of the pedestrian path at Pondok Cabe Terminal, South Tangerang received the criteria "Very Lacking". The facilities that are still lacking or not yet available are Stable, strong, weather-resistant road surface; Smooth floor texture, not slippery; Guiding Block on the pedestrian path; Lighting (lamps), 50-150 lux, based on the intensity of use, the distance between lamps is 10 m; Drainage Perpendicular to the direction of the path; Placing drainage away from the edge of the pedestrian path; Minimum path width of 110 cm for one-way paths and 160 cm for two-way paths; Safety fence or handrail for safety; Protection against sunlight and rain in the form of a canopy/trees; Information boards with good material and do not cause glare; Ramp slope 8° or height 50 cm and length 1.2 m.

The results of the Relative Importance Index (RII) analysis, the first rank with an RII value of 0.804 is a ramp with a slope of 8° or a height of 50 cm and a length of 1.2 m, the second rank with an RII value of 0.792 is a safety fence or handrail for safety, the third rank with an RII value of 0.788 is a minimum lane width of 110 cm for one-way lanes and 160 cm for two-way lanes, the fourth rank with an RII value of 0.788 is an information board with good material and does not cause glare, the fifth rank with an RII value of 0.784 is a guiding block on the pedestrian path, the sixth rank with an RII value of 0.772 is lighting (lamps), 50-150 lux, based on the intensity of use, the distance between lamps is 10 m, the seventh rank with an RII value of 0.764 is the placement of drainage away from the edge of the pedestrian path, the eighth rank with an RII value of 0.760 is a smooth floor texture, not slippery, the ninth rank with an RII value of 0.756 is perpendicular drainage with pedestrian path with a width of 50 cm and a height of 50 cm, the tenth rank with an RII value of 0.744 is a stable, strong, weather-resistant road surface, the eleventh rank with an RII value of 0.732 is protection against sunlight and rain in the form of a canopy/trees.

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